at1110paper_practice_test (v29)

1. Expand the following expression into standard form.

$$(9x + 5)(3x + 2)$$

$$27x^2 + 18x + 15x + 10$$
$$27x^2 + 33x + 10$$

2. Solve the equation.

$$(5x - 9)(7x - 3) \ = \ 0$$

$$x = \frac{9}{5} \qquad x = \frac{3}{7}$$

3. Expand the following expression into standard form.

$$(5x - 4)(5x + 4)$$

$$25x^2 + 20x - 20x - 16$$
$$25x^2 - 16$$

4. Expand the following expression into standard form.

$$(5x + 2)^2$$

$$25x^2 + 10x + 10x + 4$$
$$25x^2 + 20x + 4$$

5. Factor the expression.
$$x^2 + 8x + 12$$

$$(x+6)(x+2)$$

6. Factor the expression.
$$64x^2 - 25$$

$$(8x-5)(8x+5)$$

7. Solve the equation with factoring by grouping.
$$15x^2 + 6x - 20x - 8 \ = \ 0$$

$$(3x-4)(5x+2) = 0$$
$$x = \frac{4}{3} \qquad x = \frac{-2}{5}$$

8. Solve the equation.
$$7x^2 + 16x + 22 \ = \ 4x^2 - 3x + 2$$

$$3x^2 + 19x + 20 = 0$$
$$(3x+4)(x+5) = 0$$
$$x = \frac{-4}{3} \qquad x = -5$$